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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,741	08/01/2003	John Frederick Ackerman	RD-26408-5	3858

7590

12/08/2006

John S. Beulick  
Armstrong Teasdale LLP  
Suite 2600  
One Metropolitan Square  
St. Louis, MO 63102

EXAMINER

PERRIN, JOSEPH L

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 12/08/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/632,741  
Filing Date: August 01, 2003  
Appellant(s): ACKERMAN ET AL.

\_\_\_\_\_  
Robert B Reeser, III  
For Appellant

**EXAMINER'S ANSWER**

**MAILED**  
DEC 08 2006  
**GROUP 1700**

This is in response to the supplemental appeal brief filed 15 September 2006  
appealing from the Office action mailed 10 August 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

4,713,120	HODGENS, II et al.	12-1987
4,059,123	BARTOS et al.	11-1977

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

- A. Claims 6-7, 9-12 & 14-16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a wash system having a first fluid being a cleaning fluid and a second fluid “configured to facilitate reducing a rate of formation of particulate matter” (*i.e.* an anti-static liquid), does not reasonably provide enablement for a wash system having a first and second fluid wherein one of said first and second fluids comprises an anti-static liquid. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. Appellant’s original disclosure includes a washing system having a first fluid which is a cleaning fluid (*i.e.* for washing). Appellant’s disclosure further discloses a second fluid as an anti-static liquid. Thus, appellant’s original disclosure is not enabled for a first fluid being an

anti-static fluid. Moreover, appellant's original disclosure is not enabled for a second fluid "configured to facilitate reducing a rate of formation of particulate matter (*i.e.* anti-static liquid) and/or a first fluid being an anti-static liquid."

Appellant's disclosure is silent with respect to species which read on such limitations.

- B. Claims 6-7, 9-12 & 14-16 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The different species of liquids defining "anti-static" critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Claim 6 recites a first fluid "is an anti-static liquid". This encompasses any liquid which has that ability. However, the specification does not provide guidance with respect to any working examples (species) of anti-static liquids. Furthermore, the specification fails to provide guidance as to how to obtain such measurements for anti-static properties so as to define the meets and bounds of patent protection sought, apparently attempting to improperly incorporate by reference such anti-static liquids as commercially available. What liquids constitute an "anti-static liquid"? Without such information on what species of liquids fall within the scope of appellant's broad "anti-static liquid", one of ordinary skill in the art could not predict which liquids out of the vast number of known liquids would have anti-static properties and, accordingly, one of ordinary skill in the art would be required to perform

undue experimentation to identify whether a liquid would have “anti-static” properties even though no threshold (*i.e.* “anti-static” measurement and/or range) is disclosed. Therefore, one skilled in the art could not make and/or use the invention.

- C. Claims 6-7, 9-12 & 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,713,120 to Hodgins. Re claims 6-7 & 9-10, Hodgins discloses a gas turbine wash system (11) with a pump (compressor 14) connected to a nozzle (spray probe 20) and fluid reservoirs (12/13) (see col. 5, lines 3-14). Re claim 9, Hodgins further discloses injecting fluids from both reservoirs (12/13), which reads on appellant’s limitation of the system being “configured to inject a first fluid and a second fluid...” (see col. 5, lines 44-55). Re claims 11 & 12, Hodgins teaches that it is known to clean internal parts of gas turbine engines including compressors (see col. 1, lines 53-64). As best understood in view of the enablement rejection above, the limitations directed to the types of fluids (“anti-static liquid [that] facilitates reducing a rate of formation of particulate matter...”) are considered intended use and given little weight in the apparatus claims. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). In the instant case, the claims language “said washing system configured to inject a first fluid and

second fluid" merely requires the system to be capable of injecting the fluids since the fluids are not positively recited limitations in the apparatus. Thus, limitations directed to the fluids not positively recited are given little weight and only require the apparatus to be capable of holding/using such fluids (which Hodgens clearly discloses, as noted above). Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Daryl*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (emphasis in original) It has further been held that the recitation that an element is capable of performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. As noted above, "anti-static liquid" is positively recited but is considered non-enabling (see above rejection under 35 U.S.C. §112, first paragraph). As best understood, the disclosure is construed to read on a coating liquid which would be capable of reducing the rate of formation of particulate matter. Accordingly, since the chelating agents of Hodgens (see chelating agents such as EDTA, col. 4, lines 10-40) would be capable of reducing the rate of formation of particulate matter (*i.e.* a coating would achieve this since the coating would prevent adhesion of particles to, for instance, a gas turbine), the apparatus of Hodgens reads on appellant's claimed apparatus. Similarly re claims 12-14, since the fluid limitations are directed to

intended use (*i.e.* “for injecting a fluid”), the limitations directed to the configuration of the fluids is considered intended use and given little weight. Re claims 15-16, these claims are directed to intended use (*i.e.* when the fluid is injected during a cleaning/treating operation) and given little patentable weight. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Recitation of Hodgens reads on appellant’s claimed invention.

- D. Claims 6-7, 9-12 & 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,059,123 to Bartos. Similar to Hodgens cited above, Bartos discloses the claimed structure of a turbine engine cleaning machine (10) including a pump (compressor 14), fluid reservoirs (18/20/22/24), and nozzle manifold (96) (see Figures 1, 2, 6, and relative associated text). As noted above, the non-enabling disclosure of “anti-static liquid” is construed to read on a coating liquid which would be capable of reducing the rate of formation of particulate matter, and the intended use of types of fluids used and operation of the apparatus are given little weight (*see above*). Accordingly, since the preservative coating of Bartos would be capable of reducing the rate of formation of particulate matter (*i.e.* a coating would achieve this since the coating would



prevent adhesion of particles to, for instance, a gas turbine), the apparatus of Bartos reads on appellant's claimed apparatus. Recitation of Bartos reads on appellant's claimed invention.

#### **(10) Response to Argument**

##### In response to Appellant's Argument re Issue A:

Appellant's arguments regarding the rejection under 35 U.S.C. §112, first paragraph, have been fully considered but they are not persuasive. Appellant argues that either a first or a second fluid may be an "anti-static fluid", alleging that it would have been understood by one skilled in the art to do so in light of the specification and figures. However, appellant's arguments are not commensurate in scope with the original disclosure as filed. The Examiner cannot find anywhere in the original disclosure as filed where such claimed scope of enablement is located. Appellant has failed to particularly point out where in the original disclosure (as filed) that either the first or second fluid may be an anti-static fluid and/or a water-based cleaning solution, instead attempting to relying on the level of ordinary skill in the art in alleging the disclosure would lead a skilled artisan to the claimed invention.

From an evidence standpoint, it is textually clear from appellant's original disclosure as filed that only the first fluid is described as a "cleaning liquid" and the second fluid described as containing an "anti-static liquid". Specifically, as expressly stated in the abstract and first paragraph of the Summary of Invention, "[t]he engine

wash process includes injecting a *first liquid* into the engine *to remove particulate matter* formed within the engine that may adversely affect engine operation and performance” and “[a] *second liquid* is then injected into the engine to facilitate reducing a rate of formation of particulate matter within the gas turbine engine ... the *second liquid is an anti-static liquid that coats compressor blades* within the gas turbine engine” (emphasis added). Notwithstanding this fact, appellant’s original disclosure appears to teach away from applying the anti-static liquid first and the cleaning liquid second. Contrary to appellant’s assertion that the one skilled in the art would be led to use the cleaning liquid and antistatic liquid in either order, appellant’s original disclosure teaches away from doing so since one of ordinary skill in the art would find no logic in “coating the compressor blades” (i.e. with an “anti-static” liquid as the first liquid) and subsequently “removing particulate matter” (i.e. with a cleaning liquid as the second liquid). Doing so would appear to defeat the purpose of applying a coating if one were to simply wash the compressor blades afterward. For at least the foregoing reasons, the Examiner believes appellant’s claimed invention fails to satisfy the requirements of 35 USC §112, first paragraph.

In response to Appellant’s Argument re Issue B:

Appellant further argues the specification discloses that the anti-static liquid “facilitates suppressing electrostatic attraction of the blades” and, therefore, “one skilled in the art would not need to perform undue experimentation to determine what constitutes an anti-static liquid, but rather could duplicate the invention using any liquid

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that neutralizes particles dependent upon electrostatic attraction". The Examiner disagrees. Simply stating a potential property (if "facilitating" can even be construed as a property) of a liquid does not satisfy the enablement requirement of what liquids may or may not include such potential property. To date, appellant has failed to disclose a single working example of a liquid readable on "anti-static liquid" and the Examiner has construed the language based on what is readable on "anti-static" liquid in accordance with the level of ordinary skill in the art to be its literal meaning of preventing static. Virtually any liquid may or may not "facilitate" suppressing electrostatic attraction, especially all polar liquids which are conventionally known to include the inherent property of being conductive based on their chemical nature. Particularly, aqueous solutions (i.e. containing water) are one type of such polar liquid and are well-known for their inherent property of conducting electricity and, thus, would be fully capable of suppressing electrostatic attraction since it's natural conductivity would disperse static thereby reading on preventing static and being "anti-static".

Appellant's disclosure is textually silent with respect to what liquids, out of the vast number of potential liquids, would read on an "anti-static" liquid. Moreover, appellant's disclosure is wholly silent with respect to any tests or measures of how to determine whether or not a liquid reads on the claimed "anti-static" liquid. Appellant is reminded of 35 U.S.C. §112, first paragraph, which states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention. (emphasis added)

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Appellant's disclosure does not comply with an adequate disclosure of "anti-static" liquids in full, clear, concise, and exact terms in accordance with the statute.

In addition, appellant argues that working examples of anti-static liquids are disclosed, citing "a water-soluble, anti-static liquid, such as an antistatic agent commercially available from Dongnam Chemical Industries, Ltd., Inchon, Korea". The Examiner disagrees that such disclosure meets the provision of a working example since appellant is silent with respect to a single working example. It appears appellant is attempting to provide some type of "incorporation by reference" with regard to listing particular species of an "anti-static" liquid. Applicant's argument that "a quick search of Dongnam Chemical Industries, Ltd.'s website" to search for an "anti-static liquid" is sufficient enablement of an "anti-static" liquid is not persuasive. The Examiner knows of no provision in the rules or statute that supports an incorporation by reference as being proper by relying on an international website to define a working example. Even if, *arguendo*, one were to interpret the chemical company as being enabling for the broadly claimed "anti-static" liquid, it is still unclear as to the scope of what liquids would or would not read on appellant's claimed invention, particularly since it would be nearly impossible to determine what "anti-static" liquids were available by the chemical company at the time the invention was made. Moreover, regarding the scope of the invention at the time the invention was made, it is unclear whether the chemical company has produced more "anti-static" liquids than previously offered at the time of invention of appellant and which may have not been contemplated by appellant at time of invention? Is appellant limited to the disclosed "anti-static" liquid offered by the

chemical company? If so, exactly what “anti-static” liquid(s) were available at the time the invention was made? Such concerns raise issues of enablement of the claimed “anti-static” liquid as to the scope of the claimed invention. For at least the foregoing reasons, the Examiner believes appellant’s claimed invention fails to satisfy the requirements of 35 USC §112, first paragraph.

In response to Appellant’s Argument re Issue C:

Appellant 's arguments regarding the rejection under 35 U.S.C. §102 over HODGENS have been fully considered but they are not persuasive. The rejection of claims 6-7 & 9-12 & 14-16 are maintained for reasons of record. Namely, regarding claims 6-7 appellant argues that HODGENS does not inject an “anti-static liquid” or a “liquid to reduce a rate of formation of particulate matter”. It appears appellant is requiring explicit teaching of “anti-static liquid” in the prior art, however, this is not consistent with the well settled court findings that the law of anticipation does not require that the reference teach what Applicant is claiming, but only that the claims “read on” something disclosed in the reference. Notwithstanding this fact, appellant’s disclosure is not enabled for such a liquid (*i.e.* does not disclose a single species...what liquids read on this limitation?) and appellant’s disclosure fails to provide a single working example of an “anti-static liquid”. Thus, given the broadest reasonable interpretation in view of appellant’s original disclosure (silent to a single working example) and considering the level of ordinary skill in the art the Examiner has construed “anti-static liquid” based on its literal meaning to read on “preventing static”

and liquids capable of performing such function are considered to read on applicant's "anti-static liquid" language. Accordingly, a liquid "that facilitates reducing a rate of formation of particulate matter" reads on and is anticipated by virtually any liquid capable of performing such function (i.e. capable of preventing static) since such language is considered intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). In the instant case, HODGENS discloses plural steps of applying aqueous solutions of various additives in combination with the use of a cleaning composition for turbine engines, including chelating agents which by their chemical nature are inherently polar and conductive, thus readable on "anti-static". As best understood in view of the issues of enablement (cited above), the aqueous solutions of HODGENS include the chelating agents and/or surfactant compositions ammonium sulfamate (AS), sulfamide (S), and hydroxylamine-o-sulfonic acid (HOSA) which are well-known surfactants and coat the turbine components and, due to their well-known natural chemical properties (i.e. polarity & conductivity), are fully capable of performing the function of preventing static which would "facilitate" reducing the formation of particular matter on the gas turbine engine. Accordingly, the aqueous solution(s) of HODGENS read on appellant's "anti-static" liquid and anticipate appellant's apparatus claims including an anti-static liquid.

Re claims 9-10, appellant argues HODGENS does not teach the claimed “configured” language to inject one liquid before another. The Examiner disagrees. Applicant’s “configured” language is heavily directed to the intended use of the claimed apparatus and structurally requires only the capability of applying two fluids. As noted above, “anti-static liquid” is positively recited but is considered non-enabling (see above rejection under 35 U.S.C. §112, first paragraph). As best understood, the disclosure is construed to read on a coating liquid which would be capable of reducing the rate of formation of particulate matter. Accordingly, since the chelating agents of HODGENS (see chelating agents such as EDTA, col. 4, lines 10-40) would be capable of reducing the rate of formation of particulate matter (*i.e.* a coating would achieve this since the coating would prevent adhesion of particles to, for instance, a gas turbine), the apparatus of HODGENS reads on appellant’s claimed apparatus. Moreover, HODGENS discloses injecting fluids from both reservoirs (12/13), which fully reads on appellant’s structural limitation of the system being “configured” to inject a “first fluid” and a “second fluid” (see col. 5, lines 44-55), thus the apparatus of HODGENS is fully capable of injecting one liquid before another. Regarding claim 10, whether or not the engine is running is wholly directed to intended use and not relevant to the claimed structural limitations as claimed.

Re claims 11-12 & 14-16, appellant argues that HODGENS doesn’t teach a compressor. This is not persuasive because HODGENS teaches that it is known to clean internal parts of gas turbine engines including a compressor (see col. 1, lines 53-64) and using a nozzle (20) (see Figures 3-4 and relative associated text). The

Examiner submits that each and every structural limitation claimed by applicant is fully anticipated by the apparatus of HODGENS including applying liquid readable on an “anti-static liquid” and that the apparatus of HODGENS is fully capable of performing the claimed intended use recited throughout the claims, such as when the liquids are injected into the engine and to reduce electrostatic attraction. It is well settled that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Accordingly, the position is maintained that recitation of HODGENS reads on appellant’s claimed apparatus.

In response to Appellant’s Argument re Issue D:

Appellant 's arguments regarding the rejection under 35 U.S.C. §102 over BARTOS have been fully considered but they are not persuasive. Appellant’s arguments are substantially cumulative to HODGENS as discussed above in that appellant essentially focuses on what is meant by “anti-static liquid” and essentially argues that BARTOS does not disclose the term “anti-static”. Specifically, regarding claims 6-7 & 9-12 & 14-16 appellant argues that BARTOS does not disclose an “anti-static liquid” as in the arguments discussed above regarding HODGENS. The Examiner disagrees for reasons of same in HODGENS as the aqueous solution of BARTOS fully reads on and anticipates appellant’s claimed “anti-static liquid”. As cited in the rejection, BARTOS clearly discloses the claimed structure of cleaning machine (10) for cleaning a



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turbine engine with compressor (col. 5, lines 38-40) including a pump (compressor 14), fluid reservoirs (18/20/22/24), and nozzle manifold (96) (see Figures 1, 2, 6, and relative associated text) having such configuration to be capable of performing appellant's significant amount of intended use language. Moreover, BARTOS provides explicit teaching of supplying solvent, cleaners, preservatives and water to plural reservoirs (see, for instance, the abstract & col. 2, lines 22-40), and given the broadest reasonable interpretation in view of appellant's original disclosure and considering the level and knowledge of one having ordinary skill in the art, each of the liquids in BARTOS are considered to read on appellant's "anti-static liquid", especially water which is well known to naturally have conductive properties and which clearly read on the claimed non-enabled "anti-static liquid" as best understood by the Examiner (note the construing of the "anti-static" language above in view of the lack of enablement). Additionally, the position is further taken that applying a preservative [coating] to the turbine (as in BARTOS) reads on applying an "anti-static" coating with the intended use of facilitating reducing particular matter formation and/or electrostatic attraction such being well within the understanding of one having ordinary skill in the art. For at least the foregoing reasons, recitation of BARTOS reads on appellant's claimed invention.

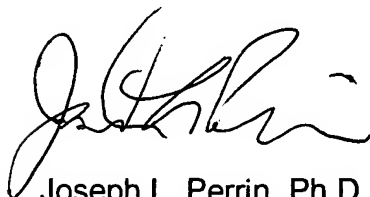
**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



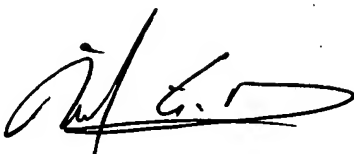
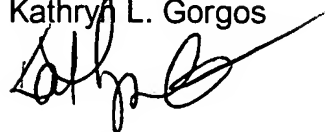
Joseph L. Perrin, Ph.D.  
Primary Examiner  
Art Unit 1746

JLP

November 29, 2006

Conferees:

Michael E. Barr  
Kathryn L. Gorgos



**MICHAEL BARR**  
**SUPERVISORY PATENT EXAMINER**

JOHN S. BEULICK  
ARMSTRONG TEASDALE LLP  
SUITE 2600  
ONE METROPOLITAN SQUARE  
ST. LOUIS, MO 63102